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Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Air Force	DATE: February 2012
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APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE							
3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>				PE 0603430F: <i>Advanced (EHF MILSATCOM (Space)</i>							
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
Total Program Element	385.033	397.446	229.171	-	229.171	153.857	139.034	120.365	100.087	Continuing	Continuing
644050: <i>Advanced MILSATCOM</i>	385.033	276.675	175.578	-	175.578	64.357	38.167	-	-	Continuing	Continuing
64A030: <i>Evolved AEHF MILSATCOM</i>	-	120.771	53.593	-	53.593	89.500	100.867	120.365	100.087	Continuing	Continuing

Note

The Cost to Complete and Total Cost for MDAP projects in this program element are documented in the R3. The Cost to Complete and Total Cost on the R2 are entered as "Continuing" and not reflective of the total cost for MDAP projects since the R2 does not account for prior years funding.

A. Mission Description and Budget Item Justification

Develop and acquire Advanced Extremely High Frequency (AEHF) Military Satellite Communications (MILSATCOM) satellites, mission control segment and cryptography for survivable, anti-jam, worldwide, secure communications for the strategic and tactical warfighters. AEHF satellites will replenish the existing EHF system (Milstar) providing much higher capacity and data rate (5x increase over Milstar II) capabilities. AEHF is a cooperative program that includes International Partners (Canada, the United Kingdom, and the Kingdom of the Netherlands).

Space Vehicle-1 (SV-1) launched on 14 August 2010. SV-1 experienced a propulsion anomaly and was raised to its geostationary orbit using alternative orbit raising techniques. The original plan was to begin SV-1 on-orbit checkout in FY11, but in order to conserve fuel SV-1 arrived at its on-orbit checkout location on 24 October 2011. SV-2 has an April 2012 projected launch.

With SV-1 launched and SV-2 scheduled to launch in April 2012, the AEHF program has nearly completed its development phase and is now addressing obsolescence, production continuity, supplier stability and industrial base issues. Future AEHF satellites will be procured using the Department of Defense (DoD) Efficient Space Procurement (ESP) concept, formerly known as Evolutionary Acquisition for Space Efficiency (EASE). The ESP concept is a procurement approach which seeks stable production and efficient sub-contractor product management through the block buy of two space vehicles at one time (please see Advanced EHF MILSATCOM P-40 Exhibit).

In addition, the ESP concept includes use of RDT&E funding for a MILSATCOM Space Modernization Initiative (SMI), formerly known as the Capability and Affordability Insertion Program (CAIP), to fund engineering activities to reduce future production costs through manufacturing and producibility enhancements, improve capabilities through insertion of new technologies, and replace obsolete parts, crypto and materials. The SMI efforts will provide opportunities for competition to develop potential technology upgrades at the component and system level for future satellites of the current or any follow-on system. SMI efforts will include obsolescence management and mitigation efforts, technology maturation, qualification of new components, subsystem and component prototyping, architecture and system concept studies (to include hosted payloads), and pathfinder efforts to address MILSATCOM capability gaps identified in the Joint Space Communications Layer (JSCL) Initial Capabilities Document (ICD) and the forthcoming "Resilient Basis for SATCOM in Joint Operations" study.

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APPROPRIATION/BUDGET ACTIVITY		R-1 ITEM NOMENCLATURE				
3600: Research, Development, Test & Evaluation, Air Force		PE 0603430F: Advanced (EHF MILSATCOM (Space))				
BA 4: Advanced Component Development & Prototypes (ACD&P)						
The FY13 request funds efforts such as SV-2 on-orbit test & operations support, incremental Mission Control Segment (MCS) development including ground mobile command and control, test/fielding and support, and studies/analyses as required. The FY13 request funds Interim Contractor Support (ICS). As SV-2 completes on-orbit test and incrementally developed MCS becomes operational, ICS sustains the AEHF system until Initial Operational Capability (IOC) declaration, projected late FY14. Additionally, the FY13 request funds preliminary design for the transition of the AEHF Key Management Architecture from the Electronic Key Management System (EKMS) to the Key Management Infrastructure (KMI). The EKMS and KMI are cryptography key management systems that enable transmission and communications security for the Protected SATCOM enterprise. The FY13 request also funds continued parts obsolescence studies and redesign, and risk reduction on MILSATCOM technologies.						
This program is in Budget Activity 4, Advanced Component Development and Prototypes, since it funds Advanced EHF technology validation and modeling.						
B. Program Change Summary (\$ in Millions)		FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget		351.817	421.687	392.884	-	392.884
Current President's Budget		385.033	397.446	229.171	-	229.171
Total Adjustments		33.216	-24.241	-163.713	-	-163.713
• Congressional General Reductions		-	-4.241			
• Congressional Directed Reductions		-	-20.000			
• Congressional Rescissions		-	-			
• Congressional Adds		-	-			
• Congressional Directed Transfers		-	-			
• Reprogrammings		-	-			
• SBIR/STTR Transfer		-5.625	-			
• Other Adjustments		38.841	-	-163.713	-	-163.713
Congressional Add Details (\$ in Millions, and Includes General Reductions)						
Project: 644050: Advanced MILSATCOM				FY 2011		FY 2012
Congressional Add: AEHF Capabilities Insertion Program (CIP)				39.700		-
Congressional Add Subtotals for Project: 644050				39.700		-
Congressional Add Totals for all Projects				39.700		-
Change Summary Explanation						
FY11: Other Adjustment row: -\$4.159M Congressional General Reductions, +\$43.000M Congressional Add for Capability Insertion Program						
FY13: Other Adjustment row: -\$180.213M for reallocation of funding to higher Department priorities; +\$1.5M to integrate operationally responsive space lessons learned; +\$15.0M for preliminary design for the AEHF crypto transition						

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Air Force								DATE: February 2012			
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>				R-1 ITEM NOMENCLATURE PE 0603430F: <i>Advanced (EHF MILSATCOM (Space)</i>				PROJECT 644050: <i>Advanced MILSATCOM</i>			
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
644050: <i>Advanced MILSATCOM</i>	385.033	276.675	175.578	-	175.578	64.357	38.167	-	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		
A. Mission Description and Budget Item Justification											
Develop and acquire Advanced Extremely High Frequency (AEHF) Military Satellite Communications (MILSATCOM) satellites, mission control segment and cryptography for survivable, anti-jam, worldwide, secure communications for the strategic and tactical warfighters. AEHF satellites will replenish the existing EHF system (Milstar) providing much higher capacity and data rate (5x increase over Milstar II) capabilities.											
AEHF is a cooperative program that includes International Partners (Canada, the United Kingdom, and the Kingdom of the Netherlands).											
Space Vehicle-1 (SV-1) launched on 14 August 2010. SV-1 experienced a propulsion anomaly and was raised to its geostationary orbit using alternative orbit raising techniques. SV-1 reached its on-orbit checkout location on 24 October 2011. SV-2 has an April 2012 launch availability.											
The FY13 request funds efforts such as SV-2 on-orbit test & operations support, incremental Mission Control Segment (MCS) development/sustainment including ground mobile command and control, test/fielding and support, and studies/analyses as required. Also, the FY13 request funds Interim Contractor Support (ICS). As SV-1-2 complete on-orbit test and incrementally developed MCS becomes operational, ICS sustains the AEHF system until Initial Operational Capability (IOC) declaration, projected lated FY14. Additionally, the FY13 request funds preliminary design for the transition of the AEHF Key Management Architecture from the Electronic Key Management System (EKMS) to the Key Management Infrastructure (KMI). The EKMS and KMI are cryptography key management systems that enable transmission and communications security for the Protected SATCOM enterprise.											
B. Accomplishments/Planned Programs (\$ in Millions)								FY 2011	FY 2012	FY 2013	
Title: AEHF SVs 1-2, MCS								345.333	276.675	160.578	
Description: Develop and acquire AEHF MILSATCOM satellites, mission control segment, and cryptography											
FY 2011 Accomplishments: In FY 2011, continued SV-1 orbit raising and maintained SV-2 in environmentally-controlled storage. Delivered MCS Increment 5 and completed MCS Increment 7. Conducted Interim Contractor Support, continued program office support and related activities, continued technology needs forecasting, and obsolescence studies.											
FY 2012 Plans:											

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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603430F: <i>Advanced (EHF MILSATCOM (Space)</i>	PROJECT 644050: <i>Advanced MILSATCOM</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
In FY 2012, initiate SV-1 on-orbit test and operations. Complete SV-2 launch readiness, launch, and initiate on-orbit test/operations. Deliver MCS Increment 7. Conduct Interim Contractor Support, continue program office support and related activities, and conduct studies/analyses, as required. FY 2013 Plans: In FY 2013, continue SV-1 operations and SV-2 on-orbit test/operations. Conduct Interim Contractor Support for satellites and Mission Control Segment, continue program office support and related activities, and conduct studies/analyses, as required.				
Title: AEHF Key Management Infrastructure (KMI) transition Description: Transition of the AEHF Key Management Architecture from Electronic Key Management System (EKMS) to KMI FY 2011 Accomplishments: Not applicable. FY 2012 Plans: Not applicable. FY 2013 Plans: Funds preliminary design for transition of AEHF Crypto Key Management Architecture (KMA) from Electronic Key Management System to Key Management Infrastructure.		-	-	15.000
Accomplishments/Planned Programs Subtotals		345.333	276.675	175.578
		FY 2011	FY 2012	
Congressional Add: AEHF Capabilities Insertion Program (CIP) FY 2011 Accomplishments: In June 2011, awarded the AEHF CIP Phase B extension to continue architecture development and risk reduction efforts for AEHF CIP 1a. AEHF CIP 1a is a software upgrade to increase the number of users that AEHF can support and increase data rates to disadvantaged terminals and improves operational flexibility through coverage areas and modes of operation that support downlink frequency reuse. Analyze CIP 1a payload/Mission Control Segment (MCS) architecture, refine 1a system changes with MCS and terminal segments, and develop a test and evaluation infrastructure.		39.700	-	
Congressional Adds Subtotals		39.700	-	

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APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 4: Advanced Component Development & Prototypes (ACD&P)				R-1 ITEM NOMENCLATURE PE 0603430F: Advanced (EHF MILSATCOM (Space)				PROJECT 644050: Advanced MILSATCOM			
C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• P-15: MPAF, PE 0303604F, Advanced EHF MILSATCOM	256.863	551.458	557.205	0.000	557.205	543.036	487.802	698.306	1,039.230	Continuing	Continuing
• R--39: RDT&E AF, PE 0603854F, Wideband Global SATCOM (Space), Project #644870, CCS-C	18.174	12.692	12.027	0.000	12.027	13.948	16.918	17.371	18.327	Continuing	Continuing
• R-180: RDT&E AF, PE 0303601F, MILSATCOM Terminals	298.736	236.581	107.237	0.000	107.237	157.787	58.209	8.202	8.310	Continuing	Continuing
D. Acquisition Strategy											
The Advanced MILSATCOM, also known as Advanced EHF (AEHF), program is a sole source acquisition to a contractor team comprised of Lockheed Martin (prime/integrator) and Northrop-Grumman (provider of the satellite payload). This team will perform the Advanced Component Development and Prototypes (ACD&P) and Systems Development and Demonstration (SDD) of two RDT&E-funded satellites and associated mission command and control ground capabilities under Cost Plus Award Fee line items on the contract. AEHF will incorporate lessons learned and improvements from Milstar and commercial SATCOM practices into the next generation EHF secure, anti-jam military communications satellite system.											
E. Performance Metrics											
Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.											

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Air Force										DATE: February 2012			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 4: Advanced Component Development & Prototypes (ACD&P)				R-1 ITEM NOMENCLATURE PE 0603430F: Advanced (EHF MILSATCOM (Space)				PROJECT 644050: Advanced MILSATCOM					
Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Cryptographic Development	MIPR	NSA:Camden, NJ	252.730	-		-		-		-	0.000	252.730	252.730
Crypto Interim Contractor Support	MIPR	CPSG:San Antonio, TX	9.713	11.367	Mar 2012	10.942	Mar 2013	-		10.942	3.724	35.746	0.000
AEHF Key Management Architecture transition	Various	Various:Various,	-	-		15.000	Dec 2012	-		15.000	Continuing	Continuing	0.000
Terminals Engineering	C/CPFF	JTEO:San Diego, CA	15.491	-		-		-		-	0.000	15.491	15.491
MILSATCOM Technology Validation	SS/CPAF	MIT/LL:Lexington, MA	21.538	-		-		-		-	0.000	21.538	21.538
AEHF Capabilities Insertion Program	Various	Various:Various,	39.700	-		-		-		-	0.000	39.700	0.000
Technical Support	SS/CPAF	MITRE:Bedford, MA	0.779	-		-		-		-	0.000	0.779	0.779
Processing Subsystem Engineering Model	Various	Hughes:El Segundo, CA	67.175	-		-		-		-	0.000	67.175	67.175
Processing Subsystem Engineering Model (2)	Various	TRW:Redondo Beach, CA	62.083	-		-		-		-	0.000	62.083	62.083
Technical Projects	Various	Various:Various,	66.659	-		-		-		-	0.000	66.659	66.659
Pre-EMD	Various	Lockheed Martin:Sunnyvale, CA	225.011	-		-		-		-	0.000	225.011	225.011
SDD	Various	Lockheed Martin:Sunnyvale, CA	4,849.777	129.233	Dec 2011	-		-		-	0.000	4,979.010	4,979.010
AEHF Interim Contractor Support	SS/CPIF	Lockheed Martin:Sunnyvale, CA	143.997	73.815	Dec 2011	103.000	Dec 2012	-		103.000	50.200	371.012	0.000
GFP	Various	Various:Various,	35.856	27.165	Dec 2011	22.604	Dec 2012	-		22.604	33.000	118.625	0.000
Radiation Hardened parts developers	Various	Various:Various	117.480	-		-		-		-	0.000	117.480	0.000
Subtotal			5,907.989	241.580		151.546		-		151.546			5,690.476

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Air Force										DATE: February 2012			
APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE				PROJECT					
3600: Research, Development, Test & Evaluation, Air Force BA 4: Advanced Component Development & Prototypes (ACD&P)				PE 0603430F: Advanced (EHF MILSATCOM (Space)				644050: Advanced MILSATCOM					
Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Various	Various	Various:Various	123.696	-		-		-		-	0.000	123.696	0.000
AEHF FFRDC (PMA)	Various	Various:Various,	118.072	13.494	Dec 2011	-		-		-	0.000	131.566	146.066
AEHF Program Office Support (PMA)	Various	Various:Various,	137.379	16.763	Dec 2011	-		-		-	0.000	154.142	170.307
AEHF Systems Engineering & Integration	C/TBD	TBD:TBD,	-	-		0.100	Dec 2012	-		0.100	0.200	0.300	0.000
Advanced Concepts Directorate technology needs forecasting FFRDC (PMA)	Various	Various:Various,	9.698	-		-		-		-	0.000	9.698	0.000
Advanced Concepts Directorate technology needs forecasting Program Office Support (PMA)	Various	Various:Various,	13.727	-		-		-		-	0.000	13.727	0.000
Subtotal			402.572	30.257		0.100		-		0.100	0.200	433.129	316.373
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Test and Evaluation support	Various	Various:Various,	22.814	4.838	Dec 2011	2.567	Dec 2012	-		2.567	0.300	30.519	30.519
Subtotal			22.814	4.838		2.567		-		2.567	0.300	30.519	30.519
Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
AEHF FFRDC (PMA)	Various	Various:Various,	-	-		6.400	Dec 2012	-		6.400	8.100	14.500	0.000
AEHF Program Office Support (PMA)	Various	Various:Various,	-	-		10.965	Dec 2012	-		10.965	4.900	15.865	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Air Force											DATE: February 2012			
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>				R-1 ITEM NOMENCLATURE PE 0603430F: <i>Advanced (EHF MILSATCOM (Space)</i>				PROJECT 644050: <i>Advanced MILSATCOM</i>						

Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Business Operating Support Services & Acquisition Mission Support (PMA)	Various	Various:Various,	-	-		4.000	Dec 2012	-		4.000	2.100	6.100	6.100
Subtotal			-	-		21.365		-		21.365	15.100	36.465	6.100

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	6,333.375	276.675		175.578		-		175.578			6,043.468

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Air Force		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
3600: Research, Development, Test & Evaluation, Air Force BA 4: Advanced Component Development & Prototypes (ACD&P)	PE 0603430F: Advanced (EHF MILSATCOM (Space)	644050: Advanced MILSATCOM

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Air Force		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603430F: <i>Advanced (EHF MILSATCOM (Space)</i>	PROJECT 644050: <i>Advanced MILSATCOM</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Field Ground Segment Software Increment 5 (eXtended Data Rate)	4	2011	4	2011
Launch second AEHF satellite	3	2012	3	2012
Field Ground Segment Software Increment 7 (eXtended Data Rate capability to International Partners)	1	2013	1	2013

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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>				R-1 ITEM NOMENCLATURE PE 0603430F: <i>Advanced (EHF MILSATCOM (Space)</i>				PROJECT 64A030: <i>Evolved AEHF MILSATCOM</i>			
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
64A030: <i>Evolved AEHF MILSATCOM</i>	-	120.771	53.593	-	53.593	89.500	100.867	120.365	100.087	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This project funds a MILSATCOM Space Modernization Initiative, (SMI), formerly the Capability and Affordability Insertion Program (CAIP), which includes engineering activities that assess promising new components and systems to confirm their suitability (capable, affordable, and producible) for the MILSATCOM mission across the payload, terminal and network segments. SMI pursues evolutionary or alternative MILSATCOM technologies and concepts to reduce obsolescence risks and improve affordability, resiliency, and responsiveness of replenishment programs, and identifies relevant commercial opportunities for potential hosted payload developments to demonstrate proof of concept for operations and future distributed architecture. In addition, SMI begins rapid acquisition capabilities supporting concept definitions and demos for small protected tactical hosted payloads or commercial-based free-flyer satellites, anti-jam enhanced theater antennas, and increased military Ka-band coverage and capacity.

The FY13 funds efforts such as parts obsolescence studies and redesign, crypto repackaging and risk reduction on MILSATCOM technologies. Additionally, FY13 funds System Engineering and Program Management to include Program Office support such as Federally Funded Research and Development Center (FFRDC) analyses, System Engineering Technical Assistance (SETA) and Systems Engineering and Integration (SE&I) to support Protected Broad Agency Announcements, Resilient Basis Study efforts, Remotely Piloted Aircraft concept definition, radiation-hardened parts productization and qualification, protected MILSATCOM Test Bed development, and affordable Information Assurance approach efforts.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2011	FY 2012	FY 2013
Title: AEHF Crypto & Parts Obsolescence	-	13.800	25.000
Description: AEHF parts obsolescence redesign effort and studies			
FY 2011 Accomplishments: Not applicable.			
FY 2012 Plans: Funds efforts such as parts obsolescence redesign to include SV-6 crypto redevelopment, and a study to assess aspects that affect the longer term stability of the AEHF product line.			
FY 2013 Plans:			

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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603430F: <i>Advanced (EHF MILSATCOM (Space)</i>	PROJECT 64A030: <i>Evolved AEHF MILSATCOM</i>		
B. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
Continues efforts such as parts obsolescence redesign to include SV-6 crypto redevelopment, and the redesign study to assess aspects that affect the longer term stability of the AEHF product line.				
Title: AEHF Capabilities Insertion Program (CIP) 1a Description: AEHF capacity improvement: Software development/implementation FY 2011 Accomplishments: Not applicable. FY 2012 Plans: Not Applicable. FY 2013 Plans: Release sole source AEHF CIP 1a Request for Proposal and award contract 4QFY13.		-	-	1.738
Title: Radiation Hardened parts Description: Qualification and productization of radiation-hardened components FY 2011 Accomplishments: Not applicable. FY 2012 Plans: Funds qualification and productization of radiation-hardened components for USAF/DOD space programs. FY 2013 Plans: Not applicable.		-	20.000	-
Title: Remotely Piloted Aircraft (RPA) Concept Definition Description: Develop architecture and design concepts to meet the warfighter's RPA communication needs. FY 2011 Accomplishments: Not applicable. FY 2012 Plans: Develop space and ground segment architecture, design concepts and requirements for RPA. Include requirements as a contract option within an ongoing solicitation. FY 2013 Plans:		-	2.700	-

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2011	FY 2012	FY 2013
Not applicable.				
Title: Protected MILSATCOM "Design for Affordability" Description: Perform design for affordability studies, demonstrations, and technology risk reduction on critical technology elements for the space payload, terminals and networking segments, small protected tactical hosted payloads, and anti-jam enhanced theater antennas to significantly reduce the cost of protected SATCOM. FY 2011 Accomplishments: Not applicable. FY 2012 Plans: A Broad Area Announcement (BAA) will be released in February 2012. A local competitive evaluation team will select and award contracts in May 2012 timeframe to various companies that meet the BAA requirements. Efforts will include architecture and system design to include Space, Ground, Terminal, Information Assurance, performance trades, affordability assessments, waveform development, and demonstrations. FY 2013 Plans: Options on selected contracts will be awarded to further continue efforts from FY12 that will increase fidelity of architecture design, demonstrate critical components, and lower the risk on next generation protected MILSATCOM systems.		-	58.672	8.375
Title: Hosted Payload BAA Description: Validate affordable business approaches and reduce risk for commercial/hosted payload alternatives such as commercial-based free-flyer satellites, increased military Ka-band coverage and capacity, and other candidate system designs for hosted payloads on commercial satellites. FY 2011 Accomplishments: Not applicable. FY 2012 Plans: A BAA will be released in March 2012. Responses will be due in 30 days. A local competitive selection evaluation team will select and award contracts of various amounts to different companies that meet the requirements in the BAA. Period of Performance for each of these companies will vary depending on the level of effort. FY 2013 Plans: Not applicable.		-	4.000	-
Title: MILSATCOM Architecture and support		-	21.599	18.480

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Air Force										DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>				R-1 ITEM NOMENCLATURE PE 0603430F: <i>Advanced (EHF MILSATCOM (Space)</i>				PROJECT 64A030: <i>Evolved AEHF MILSATCOM</i>				
B. Accomplishments/Planned Programs (\$ in Millions)												
<p>Description: Conduct System Engineering and Program Management to include Program Office support such as Federally Funded Research and Development Center (FFRDC) analyses, System Engineering Technical Assistance (SETA), Systems Engineering and Integration (SE&I) and other related activities.</p> <p>FY 2011 Accomplishments: Not applicable.</p> <p>FY 2012 Plans: Funds efforts such as refining the ongoing MILSATCOM architectures, Remote Piloted Aircraft study, and Resilient Basis Study (RBS) products including affordable Information Assurance approaches, supportive terminal payload concepts, and commercial product contributions. Funds program office support and Federally Funded Research and Development Center (FFRDC) support for above efforts.</p> <p>FY 2013 Plans: Funds efforts such as refining the ongoing MILSATCOM architectures including affordable Information Assurance approaches, supportive terminal payload concepts, and commercial product contributions. Funds program office support and Federally Funded Research and Development Center (FFRDC) support for above efforts.</p>										FY 2011	FY 2012	FY 2013
										Accomplishments/Planned Programs Subtotals		
C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost	
• R-49: <i>RDT&E AF, PE 0604436F, Next Generation MILSATCOM Technology</i>	19.898	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	69.689	
• P-15: <i>MPAF, PE 0303604F, Advanced EHF MILSATCOM</i>	256.863	551.458	557.205	0.000	557.205	543.036	487.802	698.306	1,039.230	Continuing	Continuing	
D. Acquisition Strategy												
MILSATCOM SMI will include parts obsolescence redesign and incremental capability upgrades for potential future block buys contracted with current Prime contractor team. Architecture studies, system design for affordability, and risk reduction efforts for next generation capabilities will include full and open competition efforts.												

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E. Performance Metrics Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.		

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Air Force										DATE: February 2012			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 4: Advanced Component Development & Prototypes (ACD&P)					R-1 ITEM NOMENCLATURE PE 0603430F: Advanced (EHF MILSATCOM (Space)				PROJECT 64A030: Evolved AEHF MILSATCOM				
Product Development (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
AEHF Capabilities Insertion Program (CIP) 1a	SS/CPFF	Lockheed Martin:Sunnyvale, CA	-	-		1.738	Jun 2013	-		1.738	Continuing	Continuing	0.000
AEHF Crypto and Parts Obsolescence	Various	Various:Various,	-	13.800	Feb 2012	25.000	Dec 2012	-		25.000	Continuing	Continuing	0.000
Radiation Hardened Parts developers	Various	Various:,	-	20.000	Feb 2012	-		-		-	0.000	20.000	0.000
Remotely Piloted Aircraft Concept Definition	Various	Various:Various,	-	2.700	Feb 2012	-		-		-	0.000	2.700	0.000
Protected MILSATCOM "Design for Affordability"	C/FFP	TBD:TBD,	-	58.672	May 2012	8.375	Dec 2012	-		8.375	Continuing	Continuing	0.000
Hosted Payload Broad Area Announcement studies	C/FFP	TBD:TBD,	-	4.000	May 2012	-		-		-	0.000	4.000	0.000
Subtotal			-	99.172		35.113		-		35.113			0.000
Support (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
FFRDC to support MILSATCOM Architecture studies and Protected MILSATCOM Testbed (PMA)	Various	Various:Various,	-	18.579	Feb 2012	-		-		-	0.000	18.579	0.000
Program Office Support & Other Related Activities (PMA)	Various	Various:Various,	-	3.020	Feb 2012	-		-		-	0.000	3.020	0.000
Subtotal			-	21.599		-		-		-	0.000	21.599	0.000
Test and Evaluation (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Air Force										DATE: February 2012			
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 4: Advanced Component Development & Prototypes (ACD&P)					R-1 ITEM NOMENCLATURE PE 0603430F: Advanced (EHF MILSATCOM (Space)				PROJECT 64A030: Evolved AEHF MILSATCOM				
Management Services (\$ in Millions)				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
FFRDC to support MILSATCOM Architecture studies and Protected MILSATCOM Testbed (PMA)	Various	Various:Various,	-	-		12.161	Dec 2012	-		12.161	Continuing	Continuing	0.000
Program Office Support & Other Related Activities (PMA)	Various	Various:Various,	-	-		2.705	Dec 2012	-		2.705	Continuing	Continuing	0.000
Business Operating Support Services & Acquisition Mission Support (PMA)	Various	Various:Various,	-	-		3.614	Dec 2012	-		3.614	Continuing	Continuing	0.000
Subtotal			-	-		18.480		-		18.480			0.000
			Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	120.771		53.593		-		53.593			0.000
Remarks													

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Air Force		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
3600: Research, Development, Test & Evaluation, Air Force BA 4: Advanced Component Development & Prototypes (ACD&P)	PE 0603430F: Advanced (EHF MILSATCOM (Space)	64A030: Evolved AEHF MILSATCOM

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Air Force			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 4: <i>Advanced Component Development & Prototypes (ACD&P)</i>	R-1 ITEM NOMENCLATURE PE 0603430F: <i>Advanced (EHF MILSATCOM (Space)</i>	PROJECT 64A030: <i>Evolved AEHF MILSATCOM</i>	

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Award AEHF CIP Phase B extension contract	3	2011	3	2011
Release Broad Area Announcement (BAA) for Protected MILSATCOM "Design for Affordability"	2	2012	2	2012
Award Hosted Payload BAA	3	2012	3	2012
Award contracts for Protected MILSATCOM "Design for Affordability"	3	2012	3	2012
Resilient Basis for SATCOM in Joint Operations Study Complete	3	2012	3	2012
Award options on selected Protected MILSATCOM "Design for Affordability" contracts	3	2013	4	2013
Award AEHF Capabilities Insertion Program (CIP) 1a contract	3	2013	3	2013